

**WHAT IS THE STRENGTH AND WEAKNESS OF DNA  
PROFILING BILL,2018**

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**ABSTRACT**

DNA Profiling is done by collecting DNA samples from the crime scenes and bring them back to the laboratory. Then they do analysis and after then they decide whether the person is guilty or innocent.

It can be use not just for criminal investigation but can use DNA Profiling test for paternity test, identification of any individual etc. it was first time used in 1983 and again in 1986, where young girls were raped and murdered near Narborough, England. When they first did the investigation, the killer left behind few clues, except for semen. In 1986, that man confessed to the second murder but denied committing the first. Then DNA Profiling test was done by the Professor at Leicester University Who had recently developed the first DNA fingerprinting identification system. That was the first time when DNA profiling test helped to solve a criminal case. It is seen as a breakthrough technology in cracking down on criminal and also in solving complex problems. Deoxyribonucleic acid commonly known as DNA is the hereditary complex molecules present in human and almost all other organisms.

**WHAT IS THE STRENGTH AND WEAKNESS OF DNA PROFILING BILL,2018**

DNA is a set of introductions contained in a cell inside the body. The DNA of each person is unique and because of this uniqueness DNA profiling can be used to accurately identify a person. This technology has various applications in criminal investigations. It can be used to identify the offenders of a crime. This is usually done by comparing DNA found at the crime scene with the DNA sample acquired from a suspect. In addition to this DNA profiling can be used to identify unknown deceased persons. DNA profiling is a revolutionary step developed in early 1980's to identify individuals.<sup>2</sup>It's also seen as a breakthrough technology in cracking down on criminal and also in solving complex problems. Deoxyribonucleic acid commonly known as DNA is the

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<sup>2</sup> <https://science.howstuffworks.com/dna-profiling.htm> last access on 20th June, 2019 (06:02pm)

hereditary complex molecules present in human and almost all other organisms. Nearly every cell in a multi-cellular organism possess the full set of DNA required for that organism. Most DNA molecules consists of two bio polymer strands coiled around each other to form a double helix. The two strands are called poly-nucleotides since there are composed of simpler monopolymer units called nucleotides. Each nucleotide is made up of few chemical bases adenine, guanine, cytosine and thymine. It also has a sugar called Deoxyribose and a phosphate group. These nucleotides creates proteins i.e., needed for the cell. DNA contains all of that information necessary to build and maintain an organism including biological information. DNA of every human being is different from each other. Through DNA analysis one can compare two DNA samples and ascertain whether both come from the same person or not. DNA Profiling was discovered by British scientist Alec Jeffrey in 1984.<sup>3</sup> DNA profiling is the process that helps in determining an individual's characteristics. It is most common used as a forensic technology to identify a person. A common method of collecting a reference sample is to collect a sample of blood, saliva, hair strand or even a broken nail. For instance, if a murder takes place in a room and there is blood on the floor. The DNA profiling technique can help to find out who was in the room, whether the blood belongs to the deceased or to somebody else. DNA profiling bill based on the one prepared by the law commission recently states that National and regional DNA data banks will be set up for maintain a national database for identification of victims, accused, suspects, undertrials, missing persons and unidentified persons. The bill was introduced in Lok Sabha by the Minister of Science and technology Mr Harsh Vardhan on August 9th, 2018.<sup>4</sup>

To provide for the use of this technology in India, DNA Profiling bill was introduced in the monsoon session of the Parliament. This bill allows investigation authorities to collect DNA samples from persons in connection with crimes. This may include victim of the crime or the suspect of the crime. In order to collect samples from these individuals, authorities have to take the written consent of the individual. In case the offence that is being investigated has a punishment more than 7 years, then written request is not required. In addition, the bill allows for the use of DNA technology for the identification of missing persons volunteer to provide their DNA sample. These samples are used by DNA laboratories to prepare DNA profiles. The

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<sup>3</sup> <https://www.yourgenome.org/facts/what-is-a-dna-fingerprint> last access on 20th June, 2019 (08:12pm)

<sup>4</sup> <https://www.prsindia.org/billtrack/dna-technology-use-and-application-regulation-bill-2018> last access on 21st June, 2019 (09:11am)

profiles are then stored in DNA Data banks. These data banks will be established at the National and Regional levels. And the data inside these data banks will be organised into various indices.

These may include indices for crimes, victims, offenders, missing persons, deceased persons. While the bill allows the use of DNA profiling for criminal investigation. It also allows the use of DNA profiling for certain civil matters. These civil matters may include disputes related to parentage, ancestry, medical negligence, in- vitro fertilisation. The bill provides certain safeguards of use of DNA profiling in criminal investigation. This includes safeguards related to consent, storage, or the removal of DNA profile.<sup>5</sup>

### **What information does DNA reveal about a person?**

The bill states, DNA profile is the analysis of the sample used to establish the identity of a person. However, DNA can also be used to reveal further information apart from identity this may include the medical/ physical characteristics of the individual. In countries, such as USA and the UK, the DNA profiling for criminal investigations uses that portion of the DNA which only pertains to the identity of an individual. The government informed about the DNA profiling bill to the Supreme court during the hearing of the PIL filed by an NGO on the use of DNA profiling to identify unclaimed bodies. The Supreme Court observed that the centre should take steps to bring the law as soon as possible.<sup>6</sup>

In January 2015, over a 100 unidentified bodies were found floating at the Periyar Ghat on the river Ganga in Unnao district of Uttar Pradesh. Almost two weeks later, hundreds of skeletons were discovered at Unnao. Once again even as the police grappled with the shocking discovery of these skeletons in Unnao, more such skeletons were recovered from police lines area in Moradabad and Bahraich in Uttar Pradesh. These were the bodies unclaimed after post-mortem. In 2012, there was an NGO who had filed a PIL saying that there are a lot of dead bodies whose parentage or name etc. is unknown and there are also a number of cases of either kidnapping, abduction or people being lost and their information is unidentified. There should be a system where if there is a dead body by scientific method i.e., by DNA profiling one could get to know who the person is and you can link it with those cases where somebody is lost. These cases are

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<sup>5</sup> <http://pib.nic.in/newsite/PrintRelease.aspx?relid=180376> last access on 20<sup>th</sup> June, 2019 (08:09pm)

<sup>6</sup> <https://www.thehindu.com/opinion/op-ed/decoding-the-dna-bill/article24636395.ece> last access on 20<sup>th</sup> June, 2019 (11:13pm)

not just a matter of law and order but are also connected to our emotions. In every religion, right to carry out last rites belongs to family members of the deceased. However, in some cases it's not possible to identify the bodies. The process of DNA profiling can be a big help in this situation.<sup>7</sup>

#### **Human DNA Profiling Bill provides:**

- It is easier collection of DNA samples and setting up DNA Banks.
- Punishment for misuse of DNA samples.
- Identification of unclaimed bodies.
- Help in investigating cases of rape and murder.
- Help in finding missing people.
- Identification of victims of natural disasters.
- And also identification of criminals.<sup>8</sup>

#### **Benefits of DNA Profiling:**

- Through DNA profiling, heinous crimes can be solved.
- It can also help to nab and identify criminals.
- DNA profiles taken from the place of crime can be matched with the samples of criminals arrested even after several years.
- This technique is very effective in identifying disaster/ accident victims or missing people.
- The identification of parents is also possible by the use of the DNA profiling.
- The DNA index system is first of its kind initiative.
- It allows generation of DNA profiles from live samples like saliva and blood stains within 90 to 120 minutes.
- This system uses the fastest DNA technology tools developed by USA's Integen X Inc. also known as the RapidHIT DNA system.<sup>9</sup>

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<sup>7</sup> <https://www.dnaindia.com/india/report-cops-may-have-thrown-corpse-in-ganga-claim-environmentalists-2053504> last access on 23rd June, 2019 (03:16pm)

<sup>8</sup> <https://thewire.in/the-sciences/lok-sabha-passes-dna-technology-bill-all-you-need-to-know> last access on 22nd June, 2019 (01:11am)

However, it is criticised as a technique that breaches an individual's privacy. It is also been seen as interfering in someone's privacy by collecting his/her genetic data. In 2016 Andhra Pradesh became the first state in India to start DNA Profiling to stop crimes. The DNA profiling bill proposes to regulate the use of DNA analysis of human body substance profile.

It provides for the setting up of a statutory DNA profiling board to spell out procedures and standards to establish DNA laboratories. Besides it also provides for creation of DNA data banks at national and regional levels. These banks would be responsible for restoring DNA profile received credited laboratories. They will also be responsible for maintaining certain indices like crime scene index, suspects index, offenders index, missing persons index, unknown deceased persons index. DNA experts would be notified as government scientific experts. Activists and experts raised concerns over the 2016 version of bill as well. They raised question about how the bill will safeguard the privacy of those whose DNA profiles will be stored in Data bank. DNA profiling is legal in over 60 countries to investigate criminal cases. These countries include Argentina, US, China, Britain and Canada. However, DNA profiling is allowed only in serious criminal cases in the Netherlands, Germany, France and Austria.

#### **DNA commission guidelines-**

In case of emergency, the forensic DNA laboratories are required to first inform concerned officer. Before taking the DNA sample of injured or the deceased person, it is necessary to seek an opinion from that person or his family. At the time when the person's DNA is taken the name of officer on duty should be clearly mentioned. There should be a guarantee to keep the investigation and collection private. At the same time proper maintenance should also be ensured it is clearly mentioned in the ISFG's report that to streamline the process of DNA collection. It is important to make an accurate system and report. If many agencies are collecting DNA samples, then the clarity on the number of people and correct data must be ensured.

Besides there are strict provisions from getting the DNA test of a missing person from a recognised laboratories, the laboratories should have long and authentic work experience. Apart from this it is also necessary to have a centralised electronic database to collect all DNA

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<sup>9</sup> <https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/dna-profiling> last access on 21st June, 2019 (05:45pm)

samples. The first part of the bill is the reasons for which DNA profiling will be done is the bill specified that there is a schedule and there are issues listed under the schedule in which there are majority of criminal offences and some civil claims for which this process would be done. The another part of the bill states about the fact that what are the other circumstances in which the DNA would be collected. From a crime scene, from people who are witnesses or people associated around the crime scene. DNA would be collected from them. There is a section in the bill which talks about the regulatory mechanism and how this data bank of all the DNA which has been collected will be regulated and there is an authority that is established and finally there are penal provisions which are provided in case there is an authority that is established and finally there are premium provisions which are provided in case there is a transgression of the DNA database in terms of the privacy and what are the penalties involved. This is a bill which has gone through some level of debate before Parliament. DNA technologies are based on sound technologies and method and it is not that bill that has brought in a day or so.<sup>10</sup>

Experts from law enforcement, academia, forensics judiciary recommended to amend the DNA Profiling test in Code of Criminal Procedure, 1973 and Indian Evidence Act, 1872. In India, DNA testing for Criminal investigation is done only 7,500 cases annually. However, as compared to the Britain it is very low in number. 60,000 DNA tests are done in Britain on annual basis. A proper DNA database will help to solve the criminal justice system. The Home Ministry has circulated some guidelines to states on how the DNA samples will collect from the crime scene, how it will be stored in the DNA databank and what are the measures to maintain the right of privacy of the individuals. This bill was first prepared by the Department of Biotechnology (DBT) in the year 2003. After 4 years, DNA profiling Advisory Committee along with Department of Biotechnology had drafted the human DNA profiling Bill. In 2013, a committee was created by the government to examine the 2012 draft. In 2014, they circulated the examined and amended draft to Ministry of Science and Technology for further comments. Later in 2015 a revised version of the draft was sent to the Legislative Department of the Ministry of Law and Justice.

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<sup>10</sup> <http://www.mondaq.com/india/x/782032/new+technology/DNA+Profiling+In+The+India+Towards+The+New+Age+DNA+Technology+Use+And+Application+Bill> last access on 25<sup>th</sup> June, 2019 (04:15pm)

The DNA Bill 2018 contains two types of persons whose DNA sample can be taken without their consent. These persons are suspected of any offence and where the Magistrate has given the order for DNA testing. And the other person is a suspect of heinous and in this case the order from the magistrate is not required.<sup>11</sup>

The main concern which has been expressed with regard to the protection of information which will be collected under this bill even it is for the collection of DNA samples and DNA profiling also. The law constituted a board which is very high profile board on which there will be a chairman who will be the Secretary of the Ministry of Science and Technology. Then there will be a vice- chairman who will be having 25 years of experience in this field. Then there are members who will be head or representatives of the investigating agencies. For example, Representative of Ministry of Law or Representative of CBI. The members in this board will be 13 in number who will be constituted in the Advisory Board. And the Advisory Board has been given wide powers with regard to as to how the accreditation of these agencies will be done and how this National DNA databank will be constituted and how the information will be transacted or transferred between them. Till the time the power is time the power is regulated by the Act of the Parliament and the rules are framed which are strictly implemented and the protection is provided by the Act itself that if somebody is misusing that or violating the rules then there will be strict punishment. In case somebody is misusing the data there is a punishment for imprisonment up to 3 years and penalty of Rs 1,00,000. The laboratories are collecting the data and there are some rules which states that how these data should be used and when it is to be destroyed. This bill may challenge the Article 23 of constitution of India which is self-incrimination. But Supreme Court said its previous judgement that Self-incrimination is a right but it is not an absolute right. So, there are mechanisms in which DNA tests are allowed previously. More important issues related to this bill are this is the problems which this bill addresses to? It is much looking into effective judicial implementation or effective judicial mechanism and to improve that mechanism.

The data collected in such indexes which have been divided. One is crime scene index, deceased person index, under trial index, missing children index etc. for example., in a missing persons index there is a data in report 175 children in India are missing every single day. Second, there

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<sup>11</sup> <http://lawcommissionofindia.nic.in/reports/Report271.pdf> last access on 25th June, 2019 (08:17pm)

are dead bodies not being recognised. Every year there are more than 4,000 FIR filed for the missing person. There are instances where the victim is not being able to identify who is the culprit. There was a judgement of Supreme Court that there was a rape convict who was imprisoned for seven years. Later, Supreme Court's judgement said that there was no evidence against him. This will come under offender's index. So these are kinds of challenges that our country is facing. DNA Profiling is done by collecting DNA samples from the crime scenes and bring them back to the laboratory. Then they do analysis and after then they decide whether the person is guilty or innocent.